IN THE CLAIMS

Please cancel Claims 1, and 17-22 without prejudice or disclaimer.

Claim 1 (cancelled).

Claim 2 (currently amended): A low-order interpolation filter for video or image signals, comprising:

a positioning vector generator operative to generate a positioning vector indicative of a desired position of an output sample relative to a set of input samples according to a scaling factor; and

a coefficient generator that generates interpolation coefficients as a function of the positioning vector, each of the interpolation coefficients varying non-linearly with respect to the positioning vector, the coefficients being associated with the input sample to provide a scaled output sample,

~~The filter of claim 1,~~ wherein the positioning vector generator further comprising a discrete time oscillator that derives the positioning vector and a pixel address based on the input sample and the scaling factor.

Claim 3 (currently amended): The filter of claim ~~1~~ 2, the coefficient generator further comprising a lookup table preprogrammed with coefficient values that are selected based on the positioning vector.

Claim 4 (currently amended): The filter of claim ~~1~~ 2, further comprising a memory configured to store input sample data according to a mode of scaling being performed and a number of filter taps associated with the filter.

Claim 5 (original): The filter of claim 4, the mode of scaling being performed comprising at least one of horizontal scaling, vertical scaling, and temporal scaling.

Claim 6 (original): The filter of claim 4, the number of filter taps being less than or equal to five.

Claim 7 (original): The filter of claim 4, the number of filter taps being selected depending on the mode of scaling being performed.

Claim 8 (previously presented): A low-order interpolation filter for video or image signals, comprising:

a positioning vector generator operative to generate a positioning vector indicative of a desired position of an output sample relative to a set of input samples according to a scaling factor;

a coefficient generator that generates interpolation coefficients as a function of the positioning vector, each of the interpolation coefficients varying non-linearly with respect to the positioning vector, the coefficients being associated with the input sample to provide a scaled output sample; and

the output sample being represented by $Y_n = C_0 \cdot X_n + C_1 \cdot X_n \cdot Z^{-1} .... + C_{m-1} \cdot X_n \cdot Z^{-(m-1)}$, where Y_n defines the output sample, X_n defines the input sample, m defines the number of filter taps, C_0 through C_{m-1} define respective interpolation coefficients, and Z^{-1} through $Z^{-(m-1)}$ define delay elements associated with scaling being performed.

Claim 9 (original): The filter of claim 8, the delay elements Z^{-1} through $Z^{-(m-1)}$ being indicative of an amount of delay associated with buffering the input sample X_n, the amount of delay being proportional to a type of scaling being performed.

Claim 10 (original): A sample rate converter that converts a set of input samples at a first clock frequency into an output sample at a second clock frequency, comprising:

a positioning vector generator operative to provide a positioning vector based on the set of input samples and a desired scaling factor functionally related to the first and second clock frequencies;

a delay component that delays the input sample and generates delay elements related to delays associated with processing the set of input samples; and

a low order interpolator that performs linear interpolation on the set of input samples by selectively applying a number of interpolation coefficients and corresponding delay elements to the set of input samples so as to transform the set of input samples into the output sample, the interpolation coefficients varying non-linearly with respect to the positioning vector.

Claim 11 (original): The converter of claim 10, the interpolator further comprising a lookup table preprogrammed with the interpolation coefficients, the lookup table providing the interpolation coefficients based on the positioning vector.

Claim 12 (original): The converter of claim 10, the delay component generating the delay elements according to a type of scaling being implemented by the converter.

Claim 13 (original): The converter of claim 12, the type of scaling being selected from a group comprising horizontal scaling, vertical scaling and temporal scaling.

Claim 14 (original): The converter of claim 12, the number of interpolation coefficients being less than or equal to five.

Claim 15 (original): The converter of claim 10, the interpolator generating the output sample as $Y_n = C_0 \cdot X_n + C_1 \cdot X_n \cdot Z^{-1} .... + C_{m-1} \cdot X_n \cdot Z^{-(m-1)}$, where Y_n defines the output sample, X_n defines an input sample, m defines a number of filter taps of the interpolator, C_0 through C_{m-1} define respective interpolation coefficients, and Z^{-1} through $Z^{-(m-1)}$ define delay elements associated with scaling being performed.

Claim 16 (original): The converter of claim 15, the delay elements Z^{-1} through $Z^{-(m-1)}$ being indicative of an amount of delay associated with buffering the input sample X_n, the amount of delay being proportional to a type of scaling being performed.

Claims 17-22 (cancelled).

Claim 23 (previously presented): A method for sample rate conversion, comprising:

generating a positioning vector indicative of a desired relative position of an output sample relative to a set of input samples;

applying a number of interpolation coefficients to the set of input samples to weight the set of input samples and, in turn, convert the set of input samples from an input clock frequency to an associated output clock frequency, the interpolation coefficients varying non-linearly with respect to the positioning vector; and

further comprising generating the output sample as $Y_n = C_0 \cdot X_n + C_1 \cdot X_n \cdot Z^{-1} .... + C_{m-1} \cdot X_n \cdot Z^{-(m-1)}$, where Y_n defines the output sample, X_n defines an input sample, m defines the number of interpolation coefficients, C_0 through C_{m-1} define respective interpolation coefficients, and Z^{-1} through $Z^{-(m-1)}$ define delay elements that identify delay associated with a type of scaling being performed.

Claim 24 (original): The method of claim 23, further comprising buffering the input sample, the delay elements Z^{-1} through $Z^{-(m-1)}$ being indicative of an amount of delay associated with the buffering which depends on the type of scaling being performed.